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ABSTRACT

This paper presents a rationale for studying the effect of a community's news media resources on the diversity of topics that the public considers important (the agenda). Research on media effects has followed a model that implicitly assumes that the important effects consist of the persuasion of individuals to adopt specific positions. This paper demonstrates the feasibility of effects research that is free from this assumption and focuses on diversity in agenda holding within the community as the main criterion variable. To illustrate this type of research, secondary analyses of two bodies of archived survey data are presented. Communities are grouped according to their comparative media richness, as indicated by the number of competing newspapers published in each locale. Both the mean number of problems mentioned per person and the entropy in the distribution of problems across a set of categories are higher in communities with competing daily newspapers. (Author/JM)

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MEDIA RICH, MEDIA POOR: TWO STUDIES OF DIVERSITY IN AGENDA-HOLDING

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MEDIA RICH, MEDIA POOR: TWO STUDIES OF DIVERSITY IN AGENDA-HOLDING

Studies of the effects of mass communication normally work from a model of content-specific directional attitudinal influence on individuals. That is, the typical study examines changes in the opinions of a person that correspond to the arguments made in a message to which he has been exposed. New formulations in media effects analysis consist of variations from this model. For instance, agenda-setting research involves content-specific influence of community news sources on individuals, but does not inquire into the attitudinal direction of that influence (see Becker, McCombs and McLeod, 1975). Tichenor's conflict and consensus studies are concerned with effects on the local community as a system rather than on specific individuals within it, but this research necessarily builds on a content-specific directional attitudinal influence model (Tichenor and Wackman, 1973; Tichenor, Rodenkirchen, Olien and Donohue, 1973). Research on the "information gap" is non-attitudinal and concerns an effect of mass communication on the structure of society as a whole rather than on individuals, but it is closely tied to specific items of media content (Donohue, Tichenor and Olien, 1975; McNelly and Molina, 1972). The study of "information holding" (Clarke and Kline, 1974) is non-attitudinal in its conception, but it is highly content-specific and concerned with effects on individuals.

This paper contemplates a more complete abandonment of the traditional model. It proposes and illustrates a form of media effects research that is not concerned with directional attitudinal outcomes nor with specific media content, and which evaluates media impact at the level of the community as a system rather than in terms of individuals. While this approach is novel in empirical research, the origins of its underlying assumptions are some 200 years old. The pre-empirical arguments that won adoption of the First Amendment guarantees of freedom of speech

and of the press did not revolve around any presumed power of the newspaper to exercise directional persuasive influence on individuals. Instead, it was simply assumed that press freedom would guarantee a diversity of voices and that the overall result of this would be a political system that was on the whole capable of making informed judgments on public issues.

While new modes of transmission have been added to the national media system through technological innovation in the intervening two centuries, the diversity of viewpoints expressed via those media has not necessarily expanded. Indeed, it may have shrunk appreciably in the past six decades as a consequence of the loss of newspaper competition in many communities. Even with network television and local radio news available to practically every citizen, there are considerable differences in media informational resources from one locale to another in the United States (and even greater differences around the world). One current study of media influence in the 1976 presidential campaigns is based on a contrast between two cities, one "media rich" and the other "media poor" (Patterson and Abeles 1975). Outside the cities, people can find themselves in locations that are undeniably "media poor" in comparison with metropolitan locales, where one can still expect truly competitive newspapers. Non-network television channels add an element of media richness and they too tend to be found in the major cities.

Our central question in this paper is whether the apparently greater diversity of media resources available in urban (and suburban) communities manifests itself in a corresponding diversity of perceptions about public issues among its citizenry. This is not an individual-level matter; it is not required under pluralistic political theory that each person hold a full range of views on an issue. What is assumed is only that the total set of opinions in the community will be diversified, even though each individual may hold to his own narrow personal viewpoint.

The general goal of reporters and editors in the news industry is to identify issues and explain the various positions that people hold on them. The result, if

the news media are "effective" in what they are trying to do, should be two-fold. First, the media audience should come to be concerned with those issues stressed in the news; agenda-setting research indicates that, under certain conditions at least, this is the case (McCombs and Shaw, 1972; McLeod, Becker and Byrnes, 1974; Weaver, McCombs and Spellman, 1975). Secondly, there should be diversity of perceptions of public issues. This should manifest itself first in the number and variety of issues that people think are important, and secondly in the variety of conclusions they have reached on those issues.

Lest this conceptual approach seem obvious, it should be pointed out that it is not widely shared in mass communication research. The goal of news communication that is assumed in most writings is that of achieving community agreement or consensus on an issue; Lasswell (1948), perhaps the most influential of the field's pre-empirical theorists, calls this the "correlation function" of communication, and Schramm (1971) likens the persuasive role of the media to those of the tribal council of elders in traditional society and the salesman in modern times. The "limited effects" model of mass communication (Klapper, 1960) practically dismisses the media as ineffectual because of failure to convert large numbers of individuals to new positions, or to narrow society's definitions of problems into compact packages. Diversity of opinion, on what problems are important and what should be done about them, is not only not prized in these conceptions; it is a positive hindrance to getting things done. The media are deemed to have failed when they neglect to "correlate" society into a single viewpoint.

Non-directional societal-level effects, then, run counter to traditional norms within the academic community regarding the appropriate test of media performance. This type of impact does, however, accord reasonably well both with Jeffersonian reasoning with regard to press freedom, and with the goals toward which professional news personnel strive in today's comparatively free media environment.

The Measurement of Diversity

A quarter-century ago, a measure was introduced into communication research which most of the field could not figure out quite how to use. This was Shannon's H, the statistic indicating entropy in a system (Shannon and Weaver, 1949). The underlying rationale for the measurement of H was Information Theory, and for a while it bade fair to unify all of the empirical sciences (von Bertalanffy, 1968). Schramm (1955) outlined some of its potential applications to mass communication problems, but it has fallen into relative disuse in social science as in biological science, owing apparently to operational difficulties in applying it to unbounded and living systems. It has been of some value in content analyses (Paisley, 1964; Watt and Krull, 1974) and in the study of social mobility (McFarland, 1969) in recent years, and a few devotees have used it in place of conventional parametric statistics in other types of data analysis.

Despite its seeming limitations, the statistic H has several properties that make it an ideal measure of diversity of perceptions in a local political system. First, it is a ratio scale with a true zero point; this means that all mathematical operations can be performed on it (Stevens, 1946). More importantly, it can be calculated from purely nominal scale data; directionality, as in an ordinal scale, need not be assumed insofar as the primary observations under analysis are concerned. One may start with a set of categories and observe the frequency with which events in the system under study fall into each category. Calculation of H under Shannon's formula is based on two factors, each of which is substantively important in the concept of diversity as we have been discussing it here. Entropy (H) increases with a greater number of categories, and it decreases to the extent that observations concentrate disproportionately in one or a few of these categories.

What kinds of observations, and what kinds of categories, are appropriate for assessing diversity of public issues perceptions using this measure? These are questions on which this paper hopes to initiate, rather than to resolve, debate. Here we will be content to work with secondary analyses of archived data,

understanding fully that the measures so easily available to us are not the optimal indicators of diversity. If we find provocative results with less than the conceivable best measures, the case for future research will be that much the stronger.

Two recent large-sample surveys, one of the state of Wisconsin in 1973 and the other a U.S. nationwide survey in 1974, will be utilized. The question on which our diversity measures are based in both cases concerns the respondent's perception of the "most important problem" of the society under study. In the case of the Wisconsin survey, respondents were asked what they thought was the most important problem facing that state; responses (up to three per person were recorded) were coded into 33 categories, which are listed in Appendix A. The nationwide survey, which was conducted during the 1974 election campaign by the Center for Political Studies of the University of Michigan, asked the most important problems facing the nation; again, three responses per person were recorded, and these were coded into the 15 categories that appear in Appendix B.

In this paper we will characterize these measures as agenda holding. The "most important problem" questions have been designed mainly for use in studies of the power of the mass media in setting the public agenda, which has been operationalized as the problems people think are important -- regardless of what, if anything, they think should be done about those problems. Since there are a number of limitations on the agenda-setting principle (see McLeod, Becker and Byrnes, 1974; Chaffee and Izcaray, 1975), we will not assume that the problem agendas measured in the data we are analyzing have necessarily been set by the press. Instead, we will simply note that the problems people identify as important, when aggregated across the population of a community, constitute the public agenda that is held in that community. We expect this to vary from one place to another both because the actual problems of communities differ and because the problems stressed by the local press will be somewhat different.

In the measurement of $\underline{H}$ from such data, the number of categories defined by the researchers is not so important as is the number of categories into which the responses

actually fall, and the relative frequencies in each. For instance, one might define 100 different "important problem" categories, but chances are that very few responses would fall into more than a dozen or two of them with sufficient frequency to affect the value of H significantly. At one extreme, if all responses fell into a single category, H would be minimal -- zero, in fact -- regardless of the number of categories that had been defined a priori.

The calculation of entropy is based on the formula

$$H = -\sum_{i=1}^{n} p_i \log_2 p_i$$

where n is the number of possible categories, and p_i is the probability of occurrence of the ith category. While any logarithm could theoretically be used in the formula, the base-2 log is conventionally used because of the frequent application of Information Theory to two-state systems such as electronic computers. The result is a binary digit or "bit", which is the form in which H is conventionally reported. Another way of expressing the implication of the formula is that the maximum value of entropy for n categories is Hmax = $\log_2 n$ bits. For example, if there are 16 categories into which responses can be coded, then H cannot exceed $\log_2 (16) = 4.00$. This maximum value would only be reached, however, if exactly 1/16 of all responses fell into each of the 16 categories; any deviation from this perfectly rectangular distribution of responses would reduce the value of H below 4.00 bits.

Because Hmax varies with the number of categories, the data from the two surveys we are secondarily analyzing here will not be directly comparable to one another. Specifically, Hmax = 5.04 for the Wisconsin survey, and Hmax = 3.91 for the national survey. The two studies can, however, be viewed as closely complementary to one another. The measures of agenda-holding in the two surveys are similar, as are (to a lesser extent) the coding category schemes. Each study is something of a summary test of the hypothesis that media richness of a community is associated with greater diversity in the public problems agenda held by the citizens of that community. The specification of "media rich" communities is based in both studies on the number of different daily newspapers locally published and circulated; in the national sample

study, communities are also divided roughly by population, a factor that correlates both with number of daily newspapers and with other elements of media-richness (e.g. number of television and radio stations).

The Wisconsin Study

In October, 1973 a statewide adult probability sample was drawn by the Wisconsin Survey Research Laboratory, for a study of environmental values. Among the questions asked was, "What do you think are the most important problems facing the state of Wisconsin?" Additional probes encouraged the respondent to make a second or third response. These responses were categorized by the Laboratory staff into the topic areas listed in Appendix A. To measure diversity of agenda-holding, we grouped the respondents by county and calculated two statistics. The first measure was simply the mean number of different problem categories mentioned by each respondent. The second was entropy, which was calculated separately for each county on the basis of the distribution of responses across the categories listed in Appendix A. (It should be emphasized that entropy is operationally independent of both the number of respondents, and the number of responses per person, in a community, since it is calculated from the percentages of all responses that fall into each category, rather than from the raw frequencies.)

The Laboratory's multi-stage sampling design produced interviews in 25 of Wisconsin's 50 counties. These were divided into three groups on the basis of our best estimate of media-richness (see Appendix C for full listing.) The first group of 11 counties is identified as "media-rich"; it includes two kinds of areas: those within the immediate circulation zones of competitive metropolitan newspapers (from Milwaukee, Chicago, or Minneapolis-St. Paul), and those counties in which there is more than one local daily newspaper. Group II consists of nine counties in which there is a single daily newspaper, and where metropolitan circulation is a minor factor (according to our information from persons knowledgeable about those areas). Finally, there is a set of six counties in which there is no locally published daily newspaper, and little evidence of major dominance from a metropolitan (or even

regional) daily from outside. We should emphasize that our classification of counties into these three groups is doubtless imperfect; accurate circulation data about competing newspapers in a local district is difficult to come by. One pragmatic test of the validity of our groupings will be whether the differences we find on our dependent variables follow the patterns we have hypothesized.

Table 1 shows in summary form the relevant data from the Wisconsin survey. It is clear that there is a sharp drop-off in both dependent variables, on the average, between the first (media-rich) group of counties and the other two. There are slight differences between the second and third groups overall; both are in the direction of greater diversity of agenda holding in those which are served by a single daily paper.

The simple comparisons between the media-rich counties on the one hand, and the two groups with lesser media resources on the other, are statistically quite strong. Of 154 comparisons between pairs of counties from these two groups, 115 (75%) are in the direction hypothesized for each dependent variable. Because of a few ties, the significance levels based on sign tests differ slightly ($z=7.06$, $p<.001$ for mean number of responses per person; $z=7.39$, $p<.001$ for entropy per county). Of course, it is impossible with this type of analysis to control for other factors that doubtless have a bearing on both dependent variables, and we should expect such factors as education and the availability of other (non-media) cultural resources to favor the areas that are also classified here as media-rich. Further, our estimates of entropy are based on rather few respondents in most cases; reasonably stable estimates would require samples of perhaps 50 or more from each locale. Understanding those limitations, we can state at the least that the differences found here are sufficient to establish (a) the hypothesis as one worth pursuing in studies designed specifically for it, and (b) the entropy measure as one that behaves stably enough to discern at least gross differences between communities with small samples.

Since the N for our analysis of entropy is only 25 counties, it is impractical to attempt to subdivide this sample further to control for other community cultural

factors that might correlate with diversity of agenda-holding. We turn now to the second study, in which the number of sampling locales is large enough to permit partialing on at least one such correlate, population size.

The National Study

In November 1974, following the national elections, the Center for Political Studies (CPS) of the University of Michigan conducted a nationwide survey of mass communication and political behavior. Because of the current prominence of agenda-setting research, an open-ended question about "the most important problems facing this country" was included in the questionnaire. As with the Wisconsin survey, we have used the data as coded by CPS (see Appendix B) as our estimates of the frequency of occurrence of each category in calculating H.

Table 2 presents the results for each primary sampling unit (PSU) in the CPS data set. As in the Wisconsin study (Table 1), communities have been grouped into the three categories of (I) Media-rich (more than one daily newspaper), (II) Single-daily communities, and (III) Communities without local daily newspapers. In addition, the media-rich single-daily groups have both been divided further on the basis of metropolitanism, using criteria developed by CPS from U.S. Census data. The most metropolitan group consists of the 13 largest urban communities in the nation, which in the CPS sampling design are assured of being sampled so that there are data to represent them; these are called "self-representing" standard metropolitan statistical areas (SMSAs). The remainder of the media-rich group, which consists of PSUs that were randomly sampled, is shown separately in Table 1. The single-newspaper communities are also divided on the basis of metropolitanism. Here, however, the division is between those that are classified as SMSAs and those that are not. (All of the self-representing SMSAs are media-rich.) Finally, Group III consists of communities that have no local daily paper; none of these comprises an SMSA. For a full listing of the PSUs falling into each of these five categories in our data analysis, see Appendix D.

The national study data in Table 2 generally replicate the findings from the Wisconsin study (Table 1), and support the overall hypothesis. The results are somewhat more clear-cut for the measure of entropy per community than they are for the number of responses per person, when the partialing for metropolitanism is considered. The two groups of media-rich SMSAs, which do differ in total population, do not differ appreciably in average entropy, and both are rather clearly above the other three groups in this respect. On the other hand, the number of problem categories mentioned by each respondent appears to vary more with metropolitanism than it does with media-richness (when metropolitanism is controlled). These patterns are somewhat easier to see in Table 3, which summarizes the findings from the two studies. Also consistent with the Wisconsin results is the fact that entropy varies very little among the various groups of communities that are not classified here as media-rich.

Statistically, the simple contrasts between the media-rich communities and the other PSUs in the national study are almost as large as in the Wisconsin study (above). Of 1,386 possible comparisons between each of the 33 media-rich PSUs and each of the 42 other PSUs, 74% are in the hypothesized direction for responses per person, as are 62% for the community entropy estimates. By sign test, both findings are highly significant ($z=25.00$, $p<.001$ for responses, $z=12.30$, $p<.001$ for entropy); a less conservative statistical procedure would probably yield higher estimates of significance, but would involve more assumptions about the distributions of these variables than appear warranted here.

Discussion

This paper can be considered a feasibility study, one which has established a case for more penetrating research into the question of diversity of public opinion than has been possible with the data we have presently at hand. To develop a conceptual perspective on these findings, we should first examine some of the major limitations on them. Then we can consider what types of research might be designed in the future.

One obvious problem here has been the "most important problem" question. We have used it in this study because it yields open-ended data, which are essential for measuring diversity, and because it provides comparability between our two data archives. Further, it is not an inconsequential criterion variable; the agenda held by the public in a community is a research topic of considerable interest in both media research and the field of community development. But this is not the only area in which diversity of viewpoints is important. The range of opinion on any agenda topic is also a criterion worth assessing; another is the degree of variation across time either in the problems agenda or in opinions about items on that agenda. Communities in which many different viewpoints on the same topic are aired, and in which shifts in the total public perspective occur, would seem to be functioning more in the manner of the Jeffersonian ideal than those communities where few problems are perceived as important, and where there is little diversity of opinion or change in perspective over time. The role of local media in differentiating communities in these ways is a topic worth much more extensive investigation.

The use of local sites that happen to have been sampling units in the Wisconsin and CPS surveys is largely an artifact of those survey designs, but it is a justifiable procedure. We have focused on newspapers in defining media-richness because they generally cover local circulation areas that correspond roughly to communities as we have defined them operationally here. Television has been ignored operationally here, in part because it is more difficult to define the level of TV "media-richness" of a local community where distant signals may be received, or where cable service brings in added channels. What we have not addressed at all with this method, of course, is the role of national media -- and television pursues much more of a national news orientation than does the newspaper in this country. Cross-societal comparative research comparing different types of national media systems in terms of diversity of public perspective would be very difficult to arrange in the face of political and economic barriers; it is a conceivable long-range model worth bearing in mind, however.

The concept of "media-richness" is admittedly a glib and simplistic one. Carefully designed studies might well be able to discern subtler differences between media systems, such as the impact of various legal controls, or of chain vs. independent ownership, on the degree of diversity. One important link in the hypothesized causal chain that we have omitted in this paper is that of diversity of media content. The CPS 1974 survey, from which we have taken audience data here, also includes a content archive; the CPS staff is currently coding ten fall 1974 front pages of newspapers in each of the communities in the survey into the categories of the "important problem" scheme of Appendix B. When this data set is available, secondary analysis of local media content analogous to our analysis of audience agendas here will also be possible. As we have noted, there is already some literature assessing media content diversity by means of entropy measures; our results here might well stimulate more such efforts.

Another limitation on this study is the small and variable local sample sizes. While we assume that sampling error is taken into account in our statistical tests, it is difficult to take terribly seriously estimates for a given community that are based on only a dozen or so cases. A study designed specifically to address the diversity question should (a) sample the same number of persons in each site, (b) select certain communities purposefully to provide a clear contrast in terms of local media resources, and (c) draw somewhat larger samples in these sites.

Perhaps the greatest weakness in our make-do design is the obvious fact that there are many correlates of diversity as we have measured it here, correlates that could account for our findings without any necessary effects being attributed to media resources. The one major factor that we were able to control in the national study -- the community's degree of metropolitanism -- does in fact appear to account better for the number, if not the diversity, of agenda problems held by the citizen. If a sample of a sufficient number of communities were available, a multiple regression design could be substituted for the group-contrasts approach we have had to use here. This would permit the simultaneous comparison of such predictors as educational level,

occupational and racial-ethnic distributions, tenure of residence, and other aggregate indices, along with more detailed specification of the community's media characteristics. Meanwhile, though, the results reported here seem to us highly encouraging as a first step in assessing at an empirical level the first principles on which the American nation's media system has been built.

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Table 1

Indicators of Diversity in Wisconsin Counties, by Newspaper Resources

County	(N)	Responses/person	Entropy/county
I. Media-rich counties:			
A	(33)	2.03	4.04
B	(118)	1.68	4.00
C	(26)	2.04	3.99
D	(16)	2.06	3.91
E	(14)	2.07	3.87
F	(14)	2.29	3.61
G	(27)	2.22	3.55
H	(19)	1.84	3.55
I	(17)	2.00	3.49
J	(18)	1.78	3.43
K	(14)	1.71	3.23
Weighted mean	(316)	1.89 responses	3.82 bits
II. One-newspaper counties:			
L	(23)	1.91	3.75
M	(22)	1.68	3.66
N	(13)	1.38	3.62
O	(16)	1.88	3.47
P	(13)	1.23	3.34
Q	(17)	1.65	3.33
R	(12)	2.33	3.22
S	(11)	1.73	3.19
Weighted mean	(127)	1.73 responses	3.49 bits
III. Counties with no daily newspaper:			
T	(13)	1.85	4.06
U	(14)	1.93	3.46
V	(25)	1.96	3.45
W	(13)	1.31	3.34
X	(18)	.89	3.26
Y	(8)	2.00	2.88
Weighted mean	(91)	1.64 responses	3.44 bits

NOTE: Data are from 1973 Wisconsin statewide survey. Within each group, counties are listed in descending order of entropy. For categories used in coding responses, see Appendix A. Interviewing and coding were done by Wisconsin Survey Research Laboratory. For alphabetical listing of counties in each category in this table, see Appendix C.

Table 2

Indicators of Diversity in U.S. Primary Sampling Units, by Newspaper Resources

Locale	(N)	Responses/person	Entropy/community
I. Media-rich communities:			
a. Self-representing SMSAs (including suburbs):			
A	(21)	2.19	2.94
B	(18)	2.56	2.84
C	(40)	2.53	2.78
D	(26)	2.27	2.63
E	(20)	2.45	2.55
F	(12)	2.33	2.50
G	(42)	2.55	2.45
H	(35)	2.23	2.45
I	(26)	2.31	2.44
J	(17)	2.52	2.38
K	(54)	2.50	2.31
L	(13)	2.15	2.31
M	(24)	2.13	1.95
Weighted mean	(348)	2.38 responses	2.50 bits
b. Other Media-rich SMSAs:			
N	(11)	2.64	2.95
O	(17)	2.35	2.86
P	(31)	2.32	2.79
Q	(29)	2.14	2.75
R	(22)	2.27	2.69
S	(15)	2.67	2.66
T	(19)	2.11	2.66
U	(13)	2.15	2.61
V	(21)	2.52	2.60
W	(16)	2.50	2.60
X	(20)	2.70	2.59
Y	(25)	2.00	2.58
Z	(13)	2.54	2.55
AA	(12)	1.83	2.52
BB	(37)	1.97	2.47
CC	(21)	2.24	2.32
DD	(18)	2.00	2.32
EE	(14)	1.93	2.31
FF	(17)	1.94	2.26
GG	(21)	1.81	2.23
Weighted mean	(392)	2.23 responses	2.57 bits

Table 2, continued

Locale	(N)	Responses/person	Entropy/community
II. Single-daily communities:			
a. SMSAs:			
HH	(32)	2.28	2.95
II	(18)	2.33	2.89
JJ	(18)	1.67	2.77
KK	(19)	2.47	2.68
LL	(15)	2.33	2.64
MM	(18)	2.39	2.63
NN	(22)	2.23	2.49
OO	(21)	2.62	2.29
PP	(24)	2.08	2.25
QQ	(22)	1.91	2.07
RR	(29)	2.31	2.00
SS	(8)	1.38	1.62
Weighted mean	(246)	2.21 responses	2.44 bits
b. Non-SMSA counties:			
TT	(16)	2.63	2.92
UU	(15)	2.33	2.92
VV	(12)	2.17	2.85
WW	(32)	2.00	2.76
XX	(28)	1.86	2.62
YY	(11)	2.09	2.53
ZZ	(21)	1.86	2.52
AAA	(20)	1.10	2.47
BBB	(17)	2.18	2.45
CCC	(26)	2.04	2.36
DDD	(13)	2.08	2.34
EEE	(16)	2.25	2.30
FFF	(19)	1.90	2.25
GGG	(24)	1.33	1.99
HHH	(31)	1.90	1.94
III	(10)	1.70	1.90
JJJ	(15)	1.27	1.90
KKK	(17)	1.77	1.86
LLL	(18)	1.67	1.82
Weighted mean	(361)	1.88 responses	2.35 bits

Table 2, continued

Locale	(N)	Responses/person	Entropy/community
III. Non-SMSA counties without daily newspapers:			
MMM	(30)	2.00	2.82
NNN	(25)	2.08	2.74
OOO	(24)	1.92	2.63
PPP	(26)	1.92	2.61
QQQ	(17)	2.06	2.55
RRR	(30)	1.93	2.44
SSS	(15)	1.47	2.14
TTT	(20)	1.85	2.06
UUU	(20)	2.25	2.05
VVV	(7)	2.29	1.71
WWW	(14)	1.43	1.70
Weighted mean	(228)	1.93 responses	2.42 bits

NOTE: Data are from 1974 Center for Political Studies nationwide survey. Within each group, Primary Sampling Units (PSUs) are listed in descending order of entropy. For categories used in coding responses, see Appendix B. Interviewing and coding were done by Center for Political Studies, University of Michigan. For alphabetical listing of PSUs in each category in this table, see Appendix D.

Table 3

Summary of Weighted Means in the Two Studies

	Wisconsin (counties)	National Sample		
		Self-rep. SMSAs	Other SMSAs	Non-SMSAs
Mean no. of responses per person:				
Media-rich	1.89	2.38	2.23	---
(N)	(316)	(348)	(392)	
Single dailies	1.73	---	2.21	1.88
(N)	(127)		(246)	(361)
No daily	1.64	---	---	1.93
(N)	(91)			(228)
Mean entropy of responses (in bits) per locale:				
Media-rich	3.82	2.50	2.57	---
(N)	(11)	(13)	(20)	
Single dailies	3.49	---	2.44	2.35
(N)	(8)		(12)	(19)
No daily	3.44	---	---	2.42
(N)	(6)			(11)

NOTE: Entries are taken from Tables 1 and 2. Data from the Wisconsin counties are not comparable to those from the national sample, since different questions were asked, and different category systems were used in coding the responses in the two surveys. (See Appendices A and B for details.) Cell Ns are, respectively, the number of persons represented in calculating the mean responses per person, and the number of locales represented in calculating the mean entropy per locale. Weighting of entropy scores from each locale is proportional to the number of respondents for that locale.

Appendix A

Question and Coding Categories for Wisconsin Study

Q. What do you think are the most important problems facing the state of Wisconsin?

Civil Rights
Cost of Living
Crime
DNR
Drugs
Economy
Education
Energy Crisis
Environment
Farmers' Incomes
Food
Fuel Prices
Government
Highways
Housing
Inflation
Lack of Industry
Land Use Planning
Laws
Mass Transit
Natural Resources
Need for Toll Roads
Pollution
Poor Government Officials
Poor Morals
Recreation for Young
Revenue Sources
Specific Needs of Cities
State Finances
Taxes
Unemployment
Welfare
Other

Appendix B

Question and Coding Categories for National Sample Study

Q. What do you think are the most important problems facing this country?

Agriculture
Campaign Issues
Consumer Protection
Economic and Business
Foreign Affairs
Functioning of Government
Labor/Union-Management Relations
National Defense
Natural Resources
Non-Political
Public Order
Racial
Social Welfare
Watergate
Other

Appendix C

List of Counties by Media-resources Categorization, Wisconsin Study

I. Media-rich counties: Dane, Dodge, Kenosha, Milwaukee, Price, Racine, Rock, Walworth, Washington, Waukesha, Wood

II. One-newspaper counties: Brown, Douglas, Eau Claire, Grant, Manitowoc, Outagamie, Sheboygan, Winnebago

III. Counties with no daily newspaper: Clark, Oconto, Polk, Sauk, Trempealeau, Waupaca

Note. These lists are in alphabetical order, which does not correspond with the order of listings of counties in Table 1. Classifications into Groups I, II and III are based on Ayer's Directory and supplementary information about county media resources provided by persons familiar with the areas. Sampling was conducted by the Wisconsin Survey Research Laboratory, from which sampling details are available.

Appendix D

List of PSUs by Media-resources Categorization, National Sample Study

I. Media-rich communities

a. Self-representing SMSAs (including suburbs): Baltimore, Boston, Chicago, Cleveland, Detroit, Jersey City/Newark, Los Angeles/Long Beach, New York City, Philadelphia, Pittsburgh, San Francisco/Oakland, St. Louis, Washington, D.C.

b. Other media-rich SMSAs: Atlanta GA, Bridgeport CT, Charleston WV, Columbia SC, Dayton OH, Houston TX, Indianapolis IN, Little Rock AR, Louisville KY, Minneapolis MN, Montgomery AL, Phoenix AZ, Richmond VA, Salt Lake UT, San Diego CA, Seattle WA, Syracuse NY, Trenton NJ, Tulsa OK, Worcester MA

II. Single-daily communities

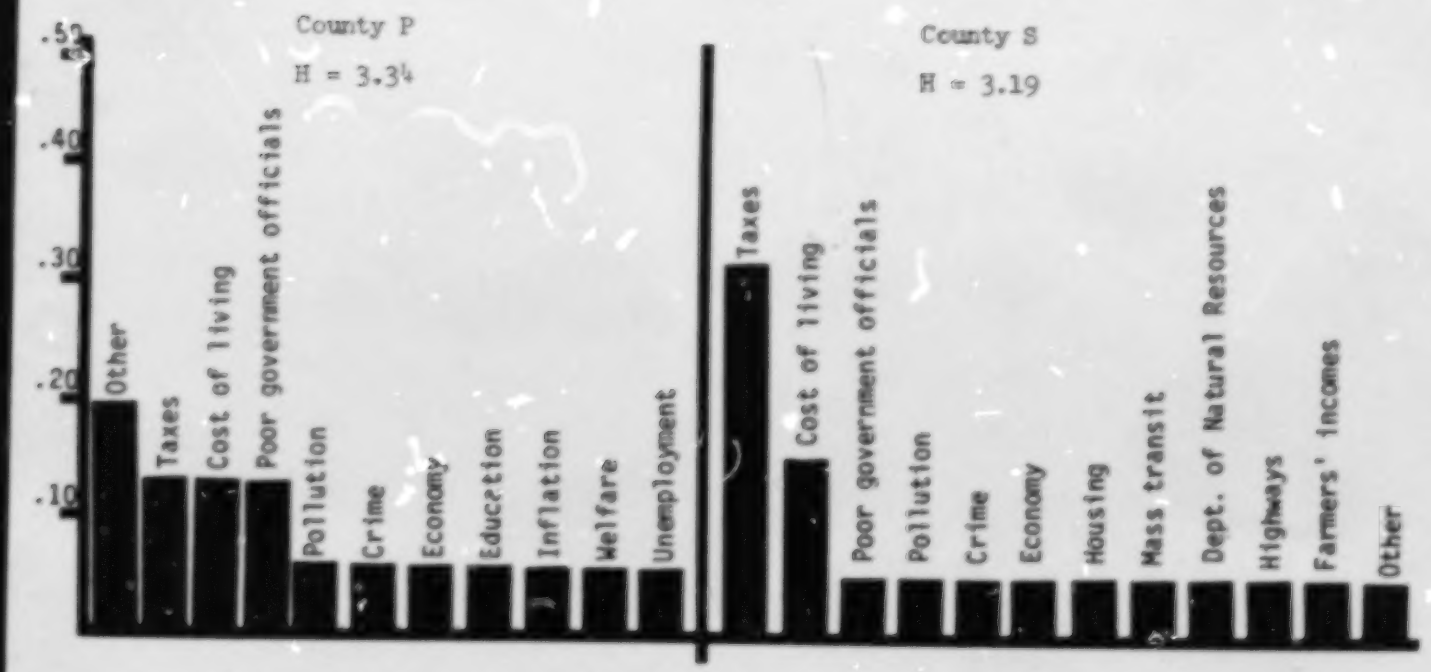
a. SMSAs: Abilene TX, Eugene OR, Flint MI, Hamilton OH, Miami FL, New London CT, Orlando FL, Sioux Falls SD, Toledo OH, Vallejo CA, Waterloo IA, Wilkes-Barre PA

b. Non-SMSA counties: Acadia LA, Adair MO, Clark AR, Gardner MA, Hancock OH, Knox OH, Logan CO, Logan IL, Lowndes GA, Sarasota FL, Pitt NC, Sheboygan WI, St. Joseph MO, Stoddard MO, Tulare CA, Ulster NY, Watauga NC, Whatcom WA, York ME

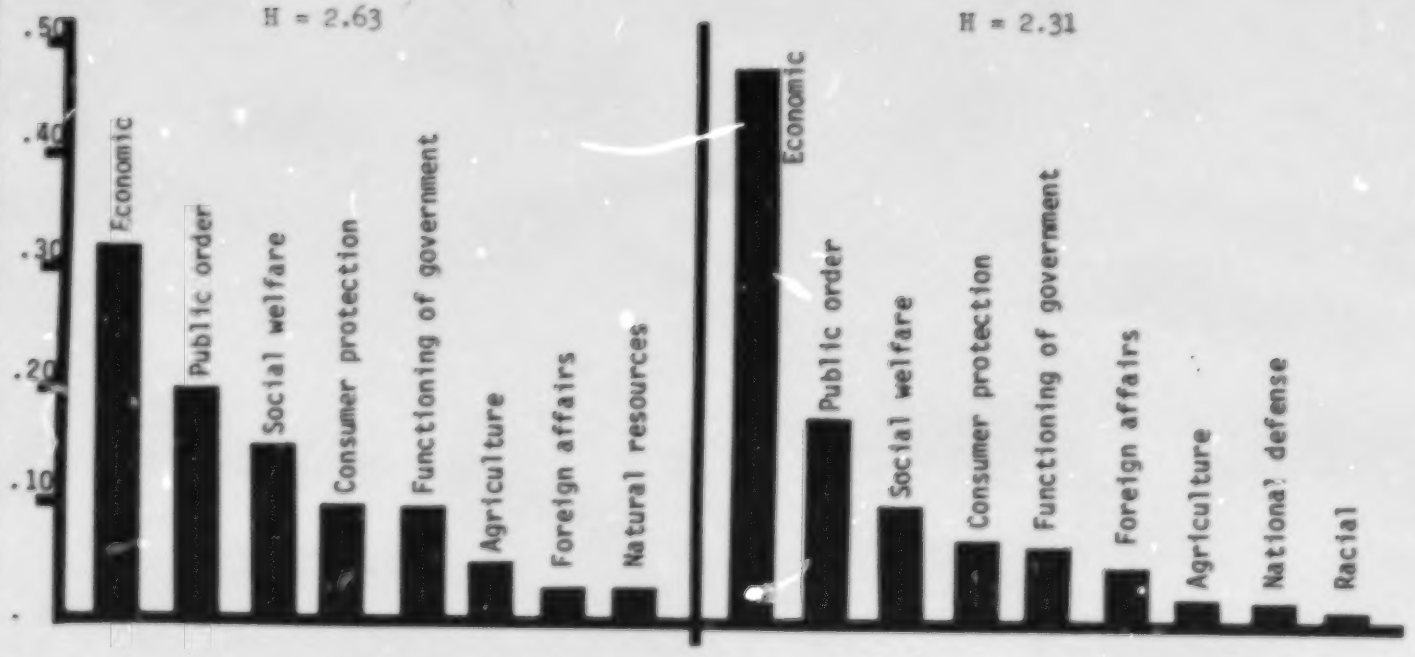
III. Non-SMSA counties without daily newspapers: Bledsoe TN, Crawford IA, Currituck NC, East Carroll LA, Franklin NB, Mississippi AR, Muehlenberg KY, Plumas CA, Randolph IL, Simpson MS, Snyder PA

Note. These lists are in alphabetical order, which does not correspond with the order of listings of PSUs in Table 2. Classifications into Group I, II and III are based on information in Ayer's Directory; SMSA classifications are based on 1970 U.S. Census and the sampling design of the Institute for Social Research at the University of Michigan, from which sampling details are available through the Inter-University Consortium for Political Research.

Comparison of Response Distributions for Two Wisconsin Counties:



Comparison of Response Distributions for Two SMSAs in National Sample:



Appendix E: Examples of Response Distributions from the Two Studies